An Evaluation of International Pandemic Recovery Strategies and Identification of Good Practice Relevant to Scotland

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Executive Summary

Background

The COVID pandemic has had a significant impact on every area of life in Scotland. The Scottish Government has been developing a set of policies to support Scotland's recovery. As part of this endeavour, UNCOVER identified and evaluated COVID recovery policies and plans from around the world, to identify good practice relevant to Scotland. We conducted this international comparison of COVID recovery strategies in two parts, with a view to establishing critical evidence on the likely effectiveness of such policies.

Methods

First, we critically reviewed the published academic literature on COVID recovery policies and interventions. We found seven relevant papers, documenting 14 policies from eight OECD countries (France, Germany, Italy, Poland, Portugal, Spain, UK and USA).

Second, we reviewed the government recovery plans and policies of selected comparator jurisdictions. We focused our analysis on the three priority outcomes for Scotland, as defined by the Scottish Government COVID Recovery Strategy: financial security for low-income households; wellbeing of children and young people; and good, green jobs and fair work. For each topic, we identified jurisdictions similar to Scotland, so that the policies identified would be as relevant and applicable as possible to the Scottish context. Eleven comparator jurisdictions are included in our analysis (Australia, Canada, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, Norway, Switzerland and selected states in USA). We found 110 relevant policies, strategies and plans (38 policies bolstering financial security for low-income households, 33 on post-COVID green recovery strategies and 39 on the wellbeing of children and young people).

Results and Discussion

Key themes emerging from our analysis are summarised below. First, we summarise key findings on Scottish Government's three policy priorities: financial security for low-income households; good, green jobs and fair work and the wellbeing of children and young people. Then we draw out cross-cutting themes and key conclusions. Finally, we comment on the strengths and limitations of this review.

Financial security for low-income households

COVID has led to the adoption of new, targeted policies in many countries to address pre-existing inequalities exacerbated by COVID. These include policies designed to increase employment, enhance skills, boost incomes, make housing more affordable, reduce digital inequalities, address gender inequalities (particularly in relation to employment and childcare); and address regional inequalities (access to employment and services).

Consistent with the Scottish Government's approach, most of the comparator jurisdictions focus on using family-oriented policies to address child poverty.

Australia and Canada offer some of the most comparable examples of policy for the Scottish Government to consider in supporting low-income households. We also consider policies from Switzerland, the Netherlands, Luxembourg, Spain and Italy.

We identified eight themes in relation to financial security for low-income households: measures for loss of jobs or unemployment, income-specific policies, affordable housing policies, family support-

specific policies, policies for people with disabilities, policies for vulnerable populations, social welfare and benefits and cost of living interventions.

Measures for loss of jobs or unemployment fall into two broad categories: employment-matching policies, aiming to boost recruitment into jobs with labour shortages; and policies focusing on using universities or apprenticeships to upskill or reskill the workforce. Threaded through these policies is an awareness of the need to enhance digital skills and an awareness of demographic challenges, specifically in relation to a shrinking working-age population.

Income specific policies fall into three broad categories: increasing the minimum wage, wage subsidies for low earners and tax cuts for low and middle-income earners.

COVID-19 exposed and exacerbated existing inequalities, so a key strand in this policy area is trying to address this through targeting support to specific **vulnerable populations**, defined in different ways (e.g., race and ethnicity, homelessness).

In most of the countries we looked at, **affordable housing** policies focus mainly on making home ownership more affordable, particularly for first time buyers and families.   The only detailed housing policy we found which clearly focuses on the most vulnerable populations is Portugal's national housing policy, under which local authorities are responsible for consulting with stakeholders to identify appropriate local solutions to housing problems. In practice, this policy has had limited success because of funding and capacity challenges.

Family support specific policies fall into three categories: investment in both the quality and quantity of early childhood education and care; paid parental leave to increase women's participation in the workforce; and subsidising the costs of childcare.

Policies for people with disabilities mainly involve assets-based approaches such as working with both employers and people with disabilities to increase workforce participation and address labour market shortages. We also found evidence of investment in support services for people with the most severe disabilities.

Some countries have increased funding for **benefits and social security**, including unemployment benefits. However, this may be a time-limited response to problems caused by COVID-19, rather than longer-term policy.

Finally, the Australian government published a raft of measures to alleviate **cost of living pressures** for low-income families, including tax measures, reduced electricity prices and childcare assistance.

Good green jobs and fair work
Several countries have chosen to prioritise green recovery strategies. These countries include Ireland, Norway, Germany, Canada and selected US states, all of which have significant socio-economic reliance on fossil fuels. Our systematic review of the published academic literature also drew on evidence from France, UK, Spain and Poland.

Green recovery strategies seek to reduce greenhouse gas (GHG) emissions through decarbonising economies, whilst boosting economic growth; however, the relative emphasis placed on these two pillars varies from country to country. Germany's plans prioritise investment in green technologies to boost export-oriented economic growth (for example, electric battery and hydrogen production), with limited emphasis on GHG emissions reductions. In contrast, American, French, Spanish and UK government plans place a relatively equal emphasis on climate mitigation measures and economic development.

Many well-developed 'green transition' (now green recovery) policies pre-date COVID-19.

We identified six themes in relation to good, green jobs and fair work: decarbonisation, green knowledge, innovation and research and development, digitalisation, energy efficiency, transition of the energy sector workforce and nature-based solutions.

Decarbonising and reducing GHG emissions is an almost universal priority; however, different countries are taking different approaches. Germany and Norway have a strong focus on protecting existing industries whilst decarbonising. For example, Norway is interested in cleaner ways of extracting oil and gas (rather than cessation of extraction). The decarbonisation of electricity generation and transport are key priorities for many countries, albeit pursued in different ways.

We also found different approaches **green innovation and research and development**. Germany is focusing on hydrogen, battery technology and electric vehicle (EV) manufacturing, with an emphasis on green investment to boost growth and competitiveness. This strategy could be risky, for example, if a market in hydrogen does not emerge; however investment in new green technologies is comparatively easier for countries like Germany that already have a foothold and a skilled workforce in these industries. Our systematic review identified a study from Spain, which argued that the success of green recovery strategies is highly dependent on upskilling the workforce, which is often challenging.

A factor that is relevant to Germany's recovery strategy is that the country has an interventionist government, which has bought stakes in companies and seeded new industries. EU investment is also highly influential: EU member states can draw on substantial investment through the EU's Recovery and Resilience Facility (RRF), as long as their plans align with EU priorities. Non-EU member states may also draw on EU investment. For example, Norway has received substantial investment in climate, environment and clean energy innovation through EU's Horizon 2020.

Our third green recovery theme is the **development of a digital economy.** Data, data skills and high-performance computing are critical in conferring competitive advantage. The COVID pandemic accelerated digital transformation and governments recognise that it is important to sustain this, for example through developing national digitalisation strategies.

Retrofitting energy efficiency measures in buildings is an attractive policy because it has the potential to alleviate energy poverty by making homes warmer at lower costs, whilst lessening GHG emissions and creating work opportunities. Furthermore, these employment opportunities are dispersed geographically, helping to address regional inequalities.

Energy sector transition, which involves supporting workers to transition to new green jobs, is another common theme. We found various approaches, including working with higher education to better align training with the evolving needs of industry; focusing on participatory and consultative approaches to workforce transition in order to make sure that costs and benefits are equitably shared, and the creation of new jobs through cleaning up abandoned oil and gas wells or (in Ireland) rehabilitating peat bogs.

Finally, we found examples of **nature-based solutions** of two sorts: initiatives to protect or restore key environments and species and measures to reduce GHG emissions from agriculture.

Wellbeing of children and young people

Perhaps surprisingly in view of the impact of school closures and lockdown policies on the wellbeing of children and young people, we found no examples of countries developing policies explicitly to

address children and young people's mental health. This is perhaps consistent with a public health approach that prioritises upstream interventions to address the root causes of health problems, rather than downstream, health system approaches.

Policies focusing on the wellbeing of children and young people tend to focus on improving childcare and education. These policies are often framed as a means of boosting longer-term economic growth and reducing inequalities, rather than responding to wellbeing deficits.

Our findings are based on an analysis of government policy documents from Australia, Belgium, Finland, France, and Germany. These countries were selected because they are comparable to Scotland in terms of key indicators of wellbeing for children and young people. Our systematic review of the published academic literature identified additional relevant policies from Italy and Spain.

We identified three themes in relation to the wellbeing of children and young people: childcare, education and employment.

Childcare Policies tend to be framed in terms of economic growth and enabling parents, especially single mothers, to participate in the labour market. Policies fall into three categories: making childcare more affordable, expanding paid parental leave and investment in childcare facilities.

We found relevant policies at all levels of the **education** system from pre-school to post-secondary. Policies focus on reducing inequalities and targeting investment on disadvantaged populations, variously defined. Many countries have a major focus on investment in digital education and skills.

We found **employment and upskilling** policies focused on the development of transferable, employment skills, through incentivising employers to take on apprentices and encouraging higher education to align their offerings to the current and projected needs of employers.

Synergies

We found considerable overlap and synergies between the three priority policy areas. Strong cross-cutting themes present across all three topic areas include policies which aim to: support incomes and address poverty; create employment opportunities; reduce inequalities; and enhance education and training.

Continuity, not change

COVID-19 does not appear to have led to a radical re-thinking of policy approaches in the way that some commentators had imagined might occur. Rather, comparator countries' COVID recovery policies often reflect pre-COVID policy priorities, pre-existing strengths and political and economic concerns. In many cases, governments have repurposed or enhanced pre-existing policies as COVID recovery policies.

Many countries are making substantial green and social investments

We found examples of both government and EU intervention. Countries aligning their COVID recovery plans with EU priorities can draw on very substantial investment from the EU's Recovery and Resilience Facility.

Fair work

Fair work is a theme that recurs in all three priority areas. We found multiple examples. Increases in the minimum wage and tax cuts for low and middle-income earners aim to boost employment income. Incentivising employers to take on apprenticeships aims to upskill the workforce, particularly in

relation to digital skills. Family support policies, such as improvements in the quality, availability and cost of childcare support parents, particularly single mothers, to return to work. We found multiple measures to incentivise employers to increase the workforce participation of vulnerable groups, including young people, people from disadvantaged backgrounds and people with disabilities. We also found evidence of investment in addressing race/ethnic inequalities in employment. We found evidence of participatory and consultative approaches to workforce transition aimed at ensuring that the costs and benefits of new green jobs are shared equitably. Finally, energy efficiency retrofit policies aim to create new jobs, particularly in geographically deprived areas. A key point to note, however, is that the state is not the key actor in this arena: the success of fair work policies is dependent on effective collaboration with employers.

Scotland's plans are in line with those of comparable jurisdictions

Government policy documents do not always describe policy and spending commitments in terms of COVID recovery, which makes it difficult to distinguish "COVID recovery strategies". However, where it is possible to identify COVID recovery strategies there appear to be strong parallels between the three themes within Scotland's Recovery Strategy and the recovery priorities adopted by other countries.

Review strengths

By integrating findings from the published academic literature with an analysis of government policy documents, we offer insights into how different countries have allocated funds and developed or refined existing social and economic policies in response to the challenges wrought by the COVID pandemic.

Our review of the published academic literature follows a robust methodology, which seeks to identify all relevant papers on this topic and to evaluate these systematically to minimise the risk of bias. We included all relevant material, translating documents where necessary.

Our systematic review of the published academic literature is complemented by a carefully targeted review of government policy documents, which focuses on jurisdictions that are comparable to Scotland in relevant respects. We chose this approach to maximise the relevance and transferability of our findings to the Scottish context.

Review Limitations

The scope of this work was very broad, ranging across multiple jurisdictions and topic areas so in-depth analysis of specific policies was not possible in the time available and we had to prioritise where to focus our attention. Our analysis of green recovery strategies placed more emphasis on green jobs than on fair work and this influenced our choice of comparator jurisdictions: a focus on fair work would have resulted in a different set of comparator countries. We have sought to redress this imbalance by highlighting examples of fair work policies identified under the low-income families and children and young people themes.

This work was conducted between the spring and autumn of 2022, a time when many countries were at the early stages of developing and articulating their COVID recovery plans. As such, it is too early in the evolution of these plans for there to be empirical evidence of the effectiveness of specific policies. Most of the plans we identified are little more than funding pledges, which may not ultimately evolve into implemented policies. Furthermore, the intervention of the war in Ukraine, which happened during the early stages of this project, adds another layer of uncertainty. The economic impact of the war and its effect on the cost of living, particularly in Europe, may result in plans being revised, delayed or abandoned altogether.

Evaluating policy documents at this early stage of implementation also meant that we found very little evidence about policy processes or about the assumptions and theories of change underlying policy choices. We found very little information, either in the academic literature review, or in the policy analysis, about the assumed mechanisms and causal chains connecting policies and desired outcomes.

1. Introduction

The COVID pandemic has had a significant impact on every area of life in Scotland and, in common with governments around the world, the Scottish Government has been developing a set of policies to support Scotland's recovery. Scotland's COVID Recovery Plan was published on 5 October (2021) and identified three priority outcomes: (1) Financial security for low-income households; (2) Wellbeing of children and young people; and (3) Good, green jobs and fair work. As part of this endeavour, UNCOVER was funded by the Coronavirus (COVID-19): Learning and Evaluation Oversight Group[1] to identify and evaluate COVID recovery policies and plans from around the world and to identify good practice relevant to Scotland.

We conducted this international comparison of COVID recovery strategies in two parts, with a view to establishing critical evidence on the actual or likely effectiveness of such policies. First, we constructed and critically appraised a systematic evidence map of policies and interventions. We searched four databases to conduct a systematic review of published academic literature on COVID recovery policies and plans, proposed or enacted by national or sub-national governments. We also included pre-existing policies adapted for COVID recovery, but we excluded policies from supra-national bodies such as the EU and policy proposals from non-governmental organisations. Then we applied a pre-defined evaluation framework to describe key aims, plans for implementation, projected costs, impact on inequalities and evidence for effectiveness for the identified recovery policies. We also explored any critical antecedents that may have influenced policy choices and the underlying implicit or explicit assumptions about how the policy was expected to achieve the desired aims.

In the second part, we conducted a review of comparator countries' COVID recovery plans for each priority outcome (which we describe as "priority topics" in this report), as derived from government policy documents. First, a different set of indicators was identified for each topic. For example, measures of equality were important for the "low-income households" topic; measures of educational attainment were important for the "wellbeing of children and young people" topic; and climatic measures were important for the "good, green jobs and fair work" topic. Based on these pre-defined criteria, we identified five comparator countries and regions for Scotland for each topic. Then, we identified and summarised the COVID recovery plans produced by comparator countries and regions. We developed a tool to guide our data extraction and analysis and we were particularly interested in the following items: (1) The problem that the policy was trying to fix and how this was articulated; (2) Any inequalities in relation to the problem and whether certain groups were disproportionately affected; (3) The policy intervention itself, including what this involved, who it involved and what it cost; (4) The theory of change underlying the policy and how the policy was expected to address the problem; (5) The desired outcomes of the policy and who and how it was supposed to benefit; (6) Any unintended harms that might arise from the policy; (7) The transferability of the policy to Scotland; (8) Any alternatives that may have been dismissed or previously tried to make way for this one; and (9) The rigour and what evidence and processes were used to develop the policy.

While an outline initial approach was proposed at the outset of this project, our methodology was intentionally iterative and collaborative, using learning from each stage to inform the approach to the next and drawing on team members' knowledge of the thematic areas and comparator countries in order to shape our investigations and analysis. Weekly whole-team meetings to discuss progress, share findings and agree next steps were an important part of our approach throughout.

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[1] https://www.gov.scot/groups/coronavirus-covid-19-learning-and-evaluation-oversight-group/

In the next chapters, we first present the methods and main results of the systematic review of published academic literature. Then, we present the methods of the comparative analysis of countries' COVID recovery plans and in three separate sections, we present the results for each topic. In the final discussion chapter, we summarise the main findings of these two parts and present the main conclusions of the report.

2. Systematic review of published academic literature on COVID recovery policies and plans

2.1 Introduction

The overall purpose of this report is to identify, describe and critically evaluate government COVID recovery plans and policies from around the world, which are relevant to Scotland. To contextualise and inform this analysis, we conducted a critical review of published academic literature on COVID recovery policies and plans, proposed or enacted by national or sub-national governments. Our evaluation of these plans seeks to identify their key aims, plans for implementation, projected costs and evidence for effectiveness. We also explore the critical antecedents that may have influenced policy choices and the underlying implicit and explicit assumptions about how the policy is expected to achieve the desired aims. Finally, we draw out recommendations that may be relevant to the Scottish Government, as it shapes its COVID recovery plans.

2.2 Methods

Full details of our research methods are provided in Appendix 1: Supplementary Methods. Here, we provide a brief summary.

We searched four literature databases using subject headings adapted to each database as well as free-text terms on the concept areas of COVID-19, recovery policies or plans, and countries of interest. The search strings were developed (MD) in consultation with the review team (Appendix 1: Supplementary Table 1.1). Search results were exported in bulk and deduplicated prior to upload to Covidence (Veritas Health Innovation) for screening. Title and abstract screening and full text screening of papers was conducted independently by two reviewers (GC, EM, RM, ET, MD), based on the screening criteria outlined in Appendix 1: Supplementary Table 1.2, with discrepancies resolved through discussion. Initially, our intention was to focus exclusively on papers that provided a formal, empirical evaluation of policy outcomes. However, our search revealed no such papers, so we revised our criteria to include papers that provided analysis of at least one policy or plan, proposed or enacted by national or sub-national governments, focusing on COVID recovery. Since some of our included papers included information on more than one policy, we next examined each paper to exclude those policies that did not meet our inclusion criteria (Appendix 1: Supplementary Table 1.2), generating a final list of included policies. We developed a tool for data extraction and analysis (Appendix 1: Supplementary Table 1.3). One reviewer extracted and analysed the data relating to each policy (GC, RM, ET).

The results of our analysis are structured using the following headings, derived from our data extraction and analysis tool: (1) Key aims (what does the policy aim to achieve?); (2) Implementation (specific plans and targets); (3) Costs and financing; (4) Evidence for effectiveness; (5) Reducing inequalities; (6) Critical antecedents (contextual factors influencing policy choices or implementation); and (7) Theories of change (implicit and explicit assumptions about how the policy is expected to achieve the desired aims).

2.3 Results and Discussion

2.3.1 Search results

Our database searches yielded 620 papers. After full text screening, seven papers met our inclusion criteria and were selected for analysis (Boyle, 2021; Dumitrescu, 2021; Filippini, 2021; Geels, 2022; Guillen, 2022; Jorge, 2022; Vaquero, 2021). The screening and selection process is summarised in a PRISMA diagram (Appendix 2: Supplementary Figure 2.1). The 129 papers excluded at the full text screen stage are listed in Appendix 2: Supplementary Table 2.1, with reasons for exclusion.

Four of the selected papers focus exclusively or mainly on green recovery (Boyle, 2021; Dumitrescu, 2021; Geels, 2022; Vaquero, 2021). The remainder focus on social policy (Guillen, 2022), health (Filippini, 2021) and housing (Jorge, 2022).

2.3.2 Description of included papers

Boyle et al (2021) reviewed fourteen Green New Deal (GND) policies, defined as policies that simultaneously address the climate crisis and economic inequality, by prioritising job creation. The analysis compares policy structures, levels of details and goals. This paper includes two policies that meet our inclusion criteria.

Dumitrescu draws on documentary analysis and statistical data in this commentary on the draft Polish Recovery and Resilience Plan. The focus of this paper is on the green recovery element of the Polish plan (Dumitrescu, 2021).

Filippini and Vinceti present a commentary on two policy proposals from the Italian Recovery and Resilience Plan. Both focus on health: one on proximity networks, structures and telemedicine for territorial healthcare assistance and innovation; the other on research and digitisation of the national health system (Filippini, 2021).

Geels and colleagues critically reviewed policy documents published by the French, German and UK governments, outlining their green recovery packages. Their analysis is contextualised with evidence from a variety of qualitative and quantitative sources, including government policy documents and reports, scientific publications, non-governmental and think-tank publications, economic data from public databases, and media reports. Their aim was to explore governments' motivations for undertaking COVID-19 green recovery plans, to assess the scale and scope of these plans and to examine the implementation of these plans.   All three national policies meet our inclusion criteria (Geels, 2022).

Guillen et al compare social investment policies in Italy and Spain in the aftermath of the COVID-19 pandemic. Italy's plan has six main missions: green revolution, infrastructures for sustainable mobility, education and research, inclusion and cohesion, and healthcare. The Spanish plan has four dimensions: ecological transition, digital transformation, social and territorial cohesion, and gender equality. The authors' aim was to address how previous policies have failed to focus on and implement social investment reforms in Spain and Italy (Guillen, 2022).

Jorge conducted an analysis of Portugal's housing reform policy. Although this policy pre-dates the pandemic, it is one of the public programmes included in the Portuguese Recovery and Resilience Plan (2021 - 2026), which aims to mitigate the economic and social impact of the pandemic.   Jorge and colleagues analysed key policy documents and conducted key informant interviews with policy coordinators to analyse policy implementation and effectiveness, providing sufficient information to meet our inclusion criteria (Jorge, 2022).

Vaquero et al used a variety of analytical approaches to identify the workforce requirements to fill the 356,000 new green jobs that it estimates will be created by Spain's recovery plans (Vaquero, 2021).

2.3.3 Description of included policies

The seven included studies incorporate 14 policies which meet our inclusion criteria. These are at various stages of development and implementation (Table 1). Thirteen are national level policies from Poland (Dumitrescu, 2021), France (Geels, 2022), Germany (Geels, 2022), Italy (Filippini, 2021; Guillen, 2022), Spain (Guillen, 2022), Portugal (Jorge, 2022), UK (Geels, 2022) and USA (Boyle, 2021). One is a state-level policy proposal from California, USA (Boyle, 2021). Nine focus on green recovery (Boyle, 2021; Dumitrescu, 2021; Geels, 2022; Vaquero, 2021), two on health (Filippini, 2021), two on social investment (Guillen, 2022) and one on housing (Jorge, 2022). Our analysis of these fourteen policies is provided below, first for green recovery policies and then for health and social policies (see Appendix 2 Supplementary Tables 2.2 and 2.3 for further details).

2.3.3.1 Green recovery policies

Policy Aims: All the green recovery policies we reviewed seek to boost economic growth, whilst reducing greenhouse gas (GHG) emissions; however, the emphasis placed on these two pillars varies from country to country. American (Boyle, 2021), French (Geels, 2022), Spanish (Vaquero, 2021) and British (Geels, 2022) plans place a relatively equal emphasis on climate mitigation measures and economic development. In contrast, the German plan is skewed heavily towards investment in green technologies to boost export-oriented economic growth, with limited emphasis on GHG emissions reductions (Geels, 2022). The papers detailing the Californian and Polish plans provide insufficient detail for analysis.

Implementation: Details about implementation plans are limited. Both the French and British governments are planning some longer-term investment in new technologies and sectors, such as hydrogen production and electric vehicle (EV) manufacturing and uptake. However, investment in both countries is focused mainly on a small number of well-established sectors, such as construction (retrofitting insulation and green central heating) and railways, which have immediate potential for GHG emissions reduction and job creation, and are geographically dispersed, spreading economic development to disadvantaged regions (Geels, 2022). The Polish draft plan prioritises housing energy efficiency (comprising 58 % of clean energy spend) but also aims to decarbonise an economy which is currently reliant on coal for more than 70 % of power production (Dumitrescu, 2021). Spain's plans aim to create an estimated 365,000 new green jobs (Vaquero, 2021), widely dispersed, both geographically and across the economy. In contrast, Germany's interventionist approach involves direct government involvement in seeding new industries and buying stakes in companies. Germany focuses on long-term industrial export-oriented modernisation, which aims to make the country a world leader in low carbon technologies (electrolysers, hydrogen production and EV manufacturing) (Geels, 2022).

Costs and Financing: It is challenging to draw direct comparisons between countries because budgetary information is reported differently in different papers (and is missing altogether in some cases). France plans to invest EUR 30 billion on green recovery (30 % of total recovery spending). Germany plans to invest EUR 27.5 billion (21.2 % of total recovery spending) (Geels, 2022). UK plans to invest GBP 15.45 billion (between 36.8 and 38.6 % of total recovery spending – denominator unclear) (Geels, 2022). Spain plans to invest EUR 56.41 billion (40.3 % of total recovery spending) (Vaquero, 2021). The UK plans to leverage pre-existing climate plans and will spread investment over a relatively long period (to 2030) (Geels, 2022). Germany's short-term plans will be partially financed via a six-month 3 % VAT reduction (Geels, 2022). All six European Union (EU) member states have

aligned their plans with EU objectives, enabling them to secure substantial investment from Next Generation EU, channelled through the EUR 672.5 billion Recovery and Resilience Facility (RRF) (Dumitrescu, 2021; Geels, 2022; Vaquero, 2021).

Evidence for effectiveness: We found no empirical evidence evaluating the effectiveness of policies; however, the paper by Geels et al offers a limited critique of the green recovery policies adopted by France, Germany and the UK (Geels, 2022). The German government hopes that targeting investment on a small number of new industries (EV and hydrogen) will result in the country gaining competitive advantage and reversing previously stagnating exports in globally competitive markets. However, this is potentially risky, particularly if a market for hydrogen fails to emerge. A more balanced approach, as taken by France, may be less risky (Geels, 2022). The UK's green recovery package lacks detail about implementation or about long-term funding. It has also been criticised for focusing on large-scale technologies and infrastructures (nuclear power, carbon-capture-and-storage, hydrogen) without compelling evidence that this approach is likely to be effective (Geels, 2022).

Vaquero et al focus on green job creation in relation to Spain's green recovery plans (Vaquero, 2021). They point out that achieving ambitious green job targets is dependent on updating skills in a workforce that currently performs poorly compared to the Organisation for Economic Cooperation and Development (OECD) average on important indicators. A further challenge is that the plan has multiple components, with a wide diversity of different jobs and skills requirements.

Reducing inequalities: Explicit links between green recovery and addressing existing inequalities are made in four of the six countries' policies. Both US policy proposals prioritise investment in historically marginalised communities, disproportionately burdened by economic neglect and environmental degradation (Boyle, 2021). The French, British and Spanish plans prioritise investment in economically disadvantaged regions (Geels, 2022; Vaquero, 2021). In contrast, apart from short term plans to preserve jobs and limit hardships arising from the pandemic, Germany's plans have placed less emphasis on reducing inequalities (Geels, 2022). We found very little detail on the Polish draft plans to draw conclusions about the extent to which they prioritise reducing inequalities.

Critical antecedents: Policy choices are path dependent, influenced by pre-existing concerns, priorities and plans and by political considerations (Geels, 2022). Concerns about racial violence and systemic, structural inequalities are reflected in the targeting of investment on historically marginalised communities in the US and Californian plans (Boyle, 2021). Decisions by the British and French governments to focus investment on a small number of mostly existing, geographically dispersed sectors and industries reflect concerns about industrial stagnation/decline, regional inequalities and the objective of creating jobs over the short term (Geels, 2022). Spanish plans to develop new green jobs across the country similarly reflects concerns about uneven regional development (Vaquero, 2021). In contrast, German plans reflect government concerns about global competition from China and other emerging economies and the need to modernise Germany's export-oriented industries (Geels, 2022). Pre-existing plans and commitments also influence policy choices. French, German, Spanish and Polish plans are all closely aligned to EU priorities, in order to secure RRF funding (Dumitrescu, 2021; Geels, 2022; Vaquero, 2021). France, Germany and the UK green recovery plans are all built on pre-existing climate and/or industrial plans and investments (Geels, 2022). Finally, political considerations influence policy choices. Geels et al suggest that President Macron's wish to rebrand himself as a green champion ahead of the 2022 French presidential election and the UK Government's wish to demonstrate climate leadership when hosting COP-26 in 2021 influenced green recovery plans (Geels, 2022).

Theories of change: We found no explicit, evidence-based elucidation of theories of change underpinning policy approaches. We suggest implicit theories of change (Appendix 2: Supplementary Table 2.2).

2.3.3.2 Health and social policies

Policy Aims: Guillen et al describe the overarching aim of Italy's and Spain's social investment policies as investing in human capital to equip people to respond to the social risks inherent in a competitive, knowledge economy. These social risks include employment precarity, inequality and skills redundancy. Social investment policies focus investment on education, healthcare, childcare, family services, long-term care, lifelong learning and active labour market policies (ALMPs). This is contrasted with traditional, compensatory welfare policies, which have a narrower focus of helping citizens cope with loss of income because of age, redundancy or illness (Guillen, 2022). Precarity is also a theme in Portugal's housing reform policy, which establishes citizens' right to a decent standard of housing and targets support on the most vulnerable, through integration with a range of other policies (Jorge, 2022). The digitisation and modernisation of services, both through technological innovation and through investment in skills, retraining and lifelong learning, is another dominant theme of these policies (Filippini, 2021; Guillen, 2022).

Implementation: Detailed plans and budgets have been completed for the Italian and Spanish policies; however, these have not yet been implemented (Guillen, 2022). The only policy that has been implemented is the Portuguese housing policy, which predates the pandemic. The policy is administered by municipal authorities, which are responsible for drawing up plans, based on a range of options to respond to local housing needs (construction, rehabilitation, building acquisition). The policy is based on a participatory approach: municipal authorities are supposed to consult extensively with key stakeholders, centring the beneficiaries of the policy (those with housing needs). Municipal authorities receive non-refundable financial support from central government, which they spend themselves and disperse to other organisations to provide appropriate housing units. They can also grant financial support directly to vulnerable households (Jorge, 2022).

Costs and Financing: Italy has secured EUR 191.5 billion in grants and loans from the EU RRF to finance its national Recovery and Resilience Plans (RRP) (Filippini, 2021). This includes EUR 55 billion for social investment policies, distributed between education and early childhood education and care (ECEC) (10.2 % of total budget of EUR 191.5 billion); health and social care (8.2 %); labour market policies (3.1 %); and other social policies (6.6 %) (Guillen, 2022). EUR 69.5 billion has been allocated to Spain through the RRF, including EUR 20.6 billion for social investment policies, split between education and ECEC (10.5 % of total budget of EUR 69.5 billion); health and social care (4.6 %); labour market policies (3.4 %); and other social policies (15.5 %) (Guillen, 2022). Jorge et al do not provide information on the costs and financing of the Portuguese housing reform policy, except to comment that budgetary provision (designed to respond to the needs of 26,000 households) is acknowledged to be insufficient to meet needs (Jorge, 2022).

Evidence for effectiveness: The Italian and Spanish plans have not yet been implemented so there is not any empirical evidence evaluating them. Guillen suggests that in both countries, rebalancing investment from traditional welfare policies, including pensions, to focus on younger generations may prove difficult in an ageing society. Governments may also struggle to find recurring funding to support an expansion in social investment policies in a challenging macroeconomic environment (Guillen, 2022).

Jorge provides a critical evaluation of Portugal's housing policy, based on document analysis and key informant interviews. Key conclusions are that allocated funding is insufficient for the scale of the

problem; local authorities lack the necessary capacity to implement the policy effectively; and coordination mechanisms across governmental agencies are insufficient to facilitate the necessary flow of information. Jorge also suggests that vulnerable groups such as Roma communities, victims of domestic violence and beneficiaries of international protection, who are the intended beneficiaries of this policy, continue to be excluded from decision-making, despite the explicitly inclusive and participatory aims of this policy (Jorge, 2022).

Reducing inequalities: The Portuguese housing reform explicitly targets the most vulnerable groups (people experiencing homelessness, people living in sub-standard or overcrowded housing, people with disabilities and the victims of domestic violence). Through adopting a participatory approach to developing local housing plans, the policy seeks to involve vulnerable groups directly in identifying appropriate housing solutions (Jorge, 2022).

The Italian healthcare reform policy seeks to address regional inequalities in accessing healthcare services (Filippini, 2021). Italy's and Spain's social investment policies include interventions targeting working families, children and young people, people with disabilities and people in long-term care, whilst also addressing social exclusion, regional inequalities, housing and urban renewal (Guillen, 2022). Guillen et al describe this as a recalibration of traditional social protections, strengthening support to younger generations and women at the expense of older generations. For example, Italy has budgeted for 228,000 new nursery places, almost doubling existing provision, whilst investing in education and training, with an emphasis on digital skills (Guillen, 2022). Spain takes a similar approach, aiming for 65,000 new nursery places and investing in digital skills and vocational education (Guillen, 2022).

Critical antecedents: The COVID recovery policies we identified address long-standing policy priorities and concerns and build on policies and priorities that predate the pandemic. Portugal's housing reform, which reflects long-standing concerns about the cost and adequacy of the country's housing stock, was introduced in 2018. Existing challenges were exacerbated by the pandemic: lockdowns and the need for self-isolation highlighted problems of overcrowding and lack of basic infrastructure. As a result, this pre-existing policy was incorporated into Portugal's COVID recovery plans (Jorge, 2022). Italy's health reforms also address well characterised challenges of long standing, including inadequate integration between hospital- and community-based health and social care services, regional inequalities, long waiting times and limited capacity to address environmental and climate change-related health risks. Whilst new models of healthcare had already been identified and structured before the pandemic, these have been given added impetus as a result of the pandemic and experience and learning from the pandemic has informed the development of specific plans (Filippini, 2021). Guillen et al suggest that social investment policies adopted by the Italian and Spanish governments are strongly influenced by the EU RRF. Both countries' national budgets for 2021 prioritised more traditional, compensatory welfare policies; however, their national recovery plans take a social investment approach to welfare, in line with EU priorities and as required to secure EU RRF funding (Guillen, 2022). Finally, Guillen et al suggest that public opinion influences policy choices. After over a decade of austerity in Italy and Spain, following the 2008 financial crash, there is now little public appetite for further austerity and much public support for investment in public services (Guillen, 2022). Other important political considerations include government stability; party competition; party attitudes and public attitudes towards the EU (Guillen, 2022).

Theories of change: We found no explicit articulation of theories of change underlying these policies. Portugal's housing reform is based on the implicit assumption that municipalities understand the housing needs of their populations and have the motivation and capacity to bring stakeholders together to identify and enact appropriate solutions. The health component of Italy's recovery plan is

based on the implicit assumption that technological and structural changes in the organisation and delivery of healthcare services will result in more equitable access to health services. Spanish and Italian recalibration of welfare policies to invest in human capital will better equip citizens to respond to the new social risks of a competitive, knowledge economy.

2.4 Conclusions

In this chapter, we analyse the published literature on COVID recovery policies proposed or enacted by national and sub-national OECD jurisdictions. We identified nine policies focusing on green recovery, two on health, two on social policy and one on housing. One (Jorge, 2022) employed key informant interviews to analyse the effectiveness of Portugal's housing reforms. The remainder were commentaries or document analyses focusing on policy aims and plans. We found no policy evaluations based on empirical data. This was unsurprising: it takes time to develop, enact and implement policies and then to conduct and publish evaluations and we are less than a year post-COVID.

We found parallels between these policies and Scotland's COVID recovery priorities. Green recovery is a ubiquitous theme, albeit interpreted with different emphases in different jurisdictions. For example, whilst Germany is using green recovery investment largely to boost its export-oriented industries and establish itself as a world leader in new green technologies, the UK and France plan to focus more on GHG emissions reduction, boosting employment and addressing regional inequalities (Geels, 2022). US green recovery policy proposals also centre on addressing historic inequalities (Boyle, 2021). We found parallels with Scotland's prioritisation of policies supporting children and young people and low-income families. In line with EU priorities, the Spanish and Italian plans focus investment on education, training, employment and support to families, with the aim of increasing population resilience and ability to thrive in a highly competitive global economy. Both Spain and Italy plan to increase childcare provision and invest in education and training at all levels (Guillen, 2022).

The COVID-19 pandemic has exacerbated pre-existing inequalities in education, healthcare, and housing across Europe. We found a variety of policies which aim to address these inequalities. Investment in education to better prepare for the anticipated expansion of green jobs in Italy and Spain (Guillen, 2022) will potentially have multifaceted impacts on improving overall quality of life for populations who have traditionally been excluded from employment. Italian healthcare reform policies are targeting regional inequalities that impact on access to quality healthcare services, pivotal for the reduction of urban/rural health inequalities (Filippini, 2021). Italian and Spanish investment in increasing social protections aims to boost support for younger generations and women (Guillen, 2022). Portugal's housing reform policy aims to establish a citizen's right to a decent standard of housing, which target the most vulnerable groups (Jorge, 2022). These initiatives echo similar issues facing Scotland.

We found that policy choices are path-dependent, with countries building on existing strengths or leveraging pre-existing policies. For example, Germany's green recovery strategy builds on its established global presence in EV manufacturing and hydrogen production (Geels, 2022); the UK and France build on pre-existing GHG emission reduction policies and goals (Geels, 2022); and Portugal has leveraged its existing housing reform policy as part of its COVID recovery plan (Jorge, 2022). Policy choices are also influenced by political and economic concerns and considerations: the recovery policies of EU countries are heavily influenced by EU priorities, as alignment with these is a pre-condition for securing RRF investment (Dumitrescu, 2021; Geels, 2022; Guillen, 2022; Vaquero, 2021); Germany's investment in new green technologies reflects concerns about maintaining its global

competitiveness (Geels, 2022); and electoral and party-political imperatives influence policy directions (Geels, 2022).

We found very little evidence that the fundamental assumptions underlying policy choices have been tested. Theories of change are not articulated or interrogated. We found no information about the mechanisms and causal chains connecting policies and desired outcomes.

Finally, it is important to note that all the papers we reviewed and the policies they contain originate from before the economic crisis due to the war in Ukraine. It is likely, therefore, that many of the suggested measures may already have been altered. For example, in its 2022 autumn statement, the UK government announced that EV owners would have to pay vehicle excise duty, a move that is directly at odds with green recovery policies (Topham, 2022).

3. Comparative analysis of COVID recovery plans of countries and regions relevant to Scotland

3.1 Introduction

The second element of this report is an analysis of policies proposed or enacted by other jurisdictions, which may be relevant to Scotland.

3.2 Methods

Given the breadth of possible policy options across the full scope of government responsibilities, we used the Scottish Government (2021) COVID Recovery Strategy as our starting point for identifying priority areas of interest. We sub-divided our review of government policies into three topics based on the three priority outcomes for Scotland, as defined by the Strategy:

- Financial security for low-income households;

- Wellbeing of children and young people; and

- Good, green jobs and fair work.

We applied the same methodology to each of the three topics at each stage, in order to allow the identification of specific, relevant policies in comparable contexts, in a systematic and transparent way. Where minor deviations from the overall methodology were necessary and appropriate for each topic, these were discussed and agreed collectively, and are recorded here.

3.2.1 Identification of comparator jurisdictions

For each topic we began by identifying a set of relevant indicators which would allow us to understand how other countries compare to Scotland in this area. To do this, we used one or more core policy documents to identify the factors which are most significant for policymaking in relation to this topic. The core policy documents and the sets of indicators which we derived are shown in Table 2.

Having established a set of indicators for each topic, we used international databases (Appendix 3: Supplementary Tables 3.1 - 3.3) to identify how Scotland is positioned against each one, and to establish a shortlist of countries which have a similar position to Scotland on each indicator. In practice, most international databases provide data for the UK rather than for the devolved nations individually, so our comparisons are generally based on UK-wide data.

We agreed to narrow down our shortlist to five comparator countries per topic, in order to allow an in-depth investigation of relevant policies within the time available for the review. We determined these final sets of five comparators by ranking the shortlisted countries in order of their similarity to Scotland, and then conducting preliminary searches of government websites in order to establish whether sufficient policy information would be available in languages the team could read, or in formats that could be translated by Google Translate and sense-checked by a fluent speaker.

Our final comparators included some countries with federal government structures. Given Scotland's position as a devolved nation of the UK, we considered whether to further include individual states within these countries as comparators. However, as state-level data is not included within the international databases we used for the initial comparison, we based this decision on team members' personal knowledge of the countries in question and how they compare to our indicators of interest; as well as whether policy decisions relevant to each theme were typically made at state- or at country-level.

The final set of comparator countries and states (where applicable) is presented in the relevant section of each topic. Further specific details of country selection procedures are provided below.

Low-income households: We used the following procedure to select comparator countries (high income countries with similar levels of inequality to Scotland). First, we selected countries that have: a Gross National Income (GNI) per capita equal to or higher than the UK; a Human Development Index (HDI) score of 0.9 or above; and an adjusted Gross Disposable Household Income (GDHI) equal to or higher than the UK. We then ranked the countries that satisfied these criteria by Gini co-efficient. We chose the five countries with Gini coefficients closest to or lower than Scotland's (i.e., countries that are slightly less unequal than Scotland, according to the Gini co-efficient) (Appendix 3: Supplementary Table 3.1).

Good, green jobs and fair work: We used the following indicators to identify comparator countries (Appendix 3: Supplementary Table 3.2).

- **Level of socioeconomic reliance on carbon fuels:** We identified countries that rely on carbon fuels (i.e., oil, gas, coal and peat) (Scottish Government, 2021) but are making efforts to decarbonise.

- **Implementation of interventions that Scotland is also considering:** We identified countries/regions that are implementing interventions or policies that are similar to the ones being considered by Scotland (Scottish Government, 2021).

- **Climate:** We considered jurisdictions with climates broadly comparable to Scotland's.

- **Governance structure:** We considered countries that have both federal and devolved political systems. We took this approach in recognition of the fact that some policy decisions in the UK are reserved (i.e., are determined by the UK Parliament rather than by devolved institutions) and that this may limit what the Scottish Government is able to do (Scottish Government, 2021). A review of some countries' regional strategies was therefore considered potentially relevant.

Wellbeing of children and young people: Our approach to country selection was based on five indicators of children and young people's well-being as identified in the 2013 UNICEF report card (Adamson, 2013). Specifically, we looked at the child poverty rate, infant mortality rate, adolescent mortality rate, early childhood education enrolment rate for 3 and 4-year-olds, and the not in education, employment or training rate (NEET) for young people. We compared the indicators of

OECD countries with Scotland and selected five countries that are close to and performing better than Scotland on these measures. Another key inclusion criterion was that the country must have specific policies focusing on children and young people's well-being in their social and economic COVID-19 recovery plan (See Appendix 3: Supplementary Table 3.3).

3.2.2 Identification of policies

For each country, within each topic, we identified a set of websites which were key sources of information on government policies. We searched each website using a core set of search terms for each topic, but we allowed for review team members to adjust each search to respond to the unique characteristics of each website. Full details of the websites searched and search strings used were recorded (Appendix 3: Supplementary Table 3.4). Each website was searched by one team member and the searches were peer reviewed by a second team member.

One agreed exception to this approach was in respect of **financial security for low-income households**. As financial measures were the subject of interest, only official budgetary documentation was included. For this topic, the team first identified the official national budgets, and then searched through these to identify relevant policies.

Because of the wide variety of policy themes and priorities adopted by exemplar countries under the **good, green jobs and fair work** theme, we undertook an additional step of ranking these policies by priority within comparator countries. Where documents did not explicitly rank policy priorities, the ranking was deduced by reviewing the amount of money earmarked for each policy or intervention and/or the amount of emphasis placed on the policy or intervention in the country's broader climate action plan blueprint.

In relation to policies on the **well-being of children and young people**, the team searched published policy documents on the national COVID-19 recovery plan for each included country to identify any relevant mention of policies of interest. In the case of Australia, their official budgetary documentation highlighted the relevant information included in this review.

3.2.3 Screening and data extraction

A set of screening criteria was developed for each topic to determine which policies to include in our analysis. These were designed to identify policies which relate to the relevant area (financial security for low-income households; wellbeing of children and young people; good, green jobs and fair work) in the specific context of COVID Recovery. The screening criteria for each topic are shown in Table 3. A data extraction form was developed and piloted for each topic. Details of data extracted for each policy is shown in Table 4. For each topic, data were extracted from all policies which had been found via the government website searches. The identified policies were grouped into main themes, which were then presented and discussed. Data were extracted by one team member and peer reviewed by a second team member.

3.2.4 Critical appraisal and thematic analysis

A critical appraisal template was developed to evaluate the policies which had been identified within each topic, drawing on existing approaches to policy analysis. The template covers: information on the problem that the policy aims to address; details of the policy intervention, including key actors and costs; theory of change (i.e. what the policy documentation says about how the intervention is expected to address the problem); expected benefits and beneficiaries of the policy; any potential harms associated with the policy; equity considerations; applicability of the policy to Scotland; any

alternative policies that may have been considered; and rigorousness of policy development processes. Full details are provided in Appendix 1 (Supplementary Table 1.3).

To structure our analysis of policies on the **wellbeing of children and young people**, we used the Scottish Government's Getting It Right For Every Child (GIRFEC) principles and values and the SHANARRI wellbeing indicators (Appendix 3: Supplementary Table 3.5) as the underlying framework for considering policies on the well-being of children and young people in the selected countries. The indicators posited that to promote well-being, every child or young person should be safe, healthy, achieving, nurtured, active, respected, responsible and included (Scottish Government, 2022a). As highlighted in the Statutory Guidance on the Assessment of Well-being (Scottish Government, 2022b), the approach to considering children's wellbeing should be "rights-based, strengths-based, holistic and adaptable enough to take account of stage of development and the complexity of each child's individual life circumstances."

3.3 Results
For each of the three topics, the results of our analysis are presented narratively by theme. We have also highlighted one or more exemplar policies for each topic, which we judge to be particularly relevant to Scotland.

3.3.1 Results: Financial security for low-income households
Employing the four indicators of GNI, HDI, GHDI, and Gini coefficient the most suitable comparators for Scotland's low-income households were Australia, Switzerland, Luxembourg, Canada, and the Netherlands (Table 5).

The budget documents we analysed provide information on the problems that policies were designed to address, on the policy interventions themselves, on their intended outcomes and on targeted beneficiaries. For some policies, there is limited information on theories of change underlying policy choices. However, we found very little information on the process of policy development and no empirical data evaluating policy effectiveness.

3.3.1.1 Distribution of Policy Themes
We identified 38 relevant policies, which we categorised into eight policy themes (Table 6): (1) Measures for loss of jobs or unemployment; (2) Income-specific policies; (3) Affordable housing policies; (4) Family support-specific policies; (5) Policies for people with disabilities; (6) Policies for vulnerable populations; (7) Social welfare and benefits; and (8) Cost of living interventions for low-income families. Each of these can be further broken down into sub-themes (Appendix 4: Supplementary Table 4.1). The most common themes addressed by comparator countries were family-specific policies and policies for people with disabilities (both addressed by 4 of 5 comparator countries). This is in line with Scottish Government policy priorities addressing child poverty. Comparatively, Australian policies addressed most of the identified themes (7 of 8); however, Canada had the most policies (13 of 38). Therefore, both Canada and Australia could be considered the most closely applicable to Scotland in terms of policies addressing financial security for low-income households (Scottish Government, 2021).

3.3.1.2 Analysis of Policy Themes
Theme 1: Measures for loss of jobs or unemployment: We identified five policies across three comparator countries addressing this theme. Australia proposed two policies in their *National Workforce Strategy*. The first policy enhanced employment opportunities by supporting recruitment into jobs in sectors with labour shortages. The second focused on upskilling and reskilling employees by assigning 405.7 million Australian dollars (AUD) for regional apprenticeships and universities

(Commonwealth of Australia, 2021). Canada proposed to provide 84.2 million Canadian dollars (CAD) over four years to double funding for the *Union Training and Innovation Program* (Government of Canada, 2022c). This aims to help an additional 3,500 apprentices annually from underrepresented groups to begin and succeed in careers in the skilled trades, through mentorship, career services, and job matching. Similarly, Luxembourg budgeted for two policies for upskilling and employment matching: training courses to respond to current job shortages; and training courses for core and digital skills. Luxembourg also focused on raising employers' awareness of the impact of new trends (e.g., digital, demographic) on jobs and skills, to encourage a "preventive approach" to unemployment (Commission des Finances et du Budget, 2022).

Theme 2: Income specific policies: We identified three policies in two countries that aimed to bolster financial security during the COVID-19 recovery period by directly supporting incomes. In 2021, Canada's government introduced legislation that increased the federal minimum wage to CAD 15, to reduce income inequality and to address the fact that the poorest in society were the most severely economically impacted by the pandemic. Additionally, in their 2022 budget, the Canadian government announced plans to alter the *Major transfer to persons* arrangements to focus on financial security through the continuation of *Employment Insurance* (EI), consisting of the *Canada Emergency Wage Subsidy* and other transfer payments to prevent unemployment (Government of Canada, 2022c). The Australian government took a different approach (Box 1): they delivered an additional AUD 7.8 billion in tax cuts by retaining the low and middle-income tax offset (LMITO) tax cuts. This aimed to support household income and generate economic activity, supporting jobs growth. More than 10 million low- and middle-income earners are expected to benefit from payments worth up to AUD 1,080 per individual. It is forecast that this will boost GDP by around AUD 4.5 billion in 2022-23 (Commonwealth of Australia, 2021).

Theme 3: Affordable Housing policies: Three countries made affordable housing a priority in their budgets. The Australian Government outlined the *Delivery of More Affordable Housing* policy under the measure titled *Housing Package* in the 2021-2022 budget. This array of initiatives aims to support citizens to purchase homes with a minimal deposit. The *First Home Guarantee* (formerly the *First Home Loan Deposit Scheme*) provides for 35,000 home guarantees annually; the *Family Home Guarantee* provides for 5,000 guarantees annually to 2025; and a new *Regional Home Guarantee* provides for 10,000 places annually to 2025. In addition, the Government proposed to increase the Government guaranteed liability cap of the National Housing and Finance Investment Corporation (NHFIC) by AUD 2.0 billion to AUD 5.5 billion to enable NHFIC to support increased loans for affordable housing (Commonwealth of Australia, 2021). Luxembourg invested in several major projects involving construction of affordable social housing for rent and for sale in the 2021-2022 budget, underpinned by the earlier *Special Fund for Housing Development* (introduced on 1 Apr 2020) and *Housing Pact 2.0* (Commission des Finances et du Budget, 2022). In response to a strong demand for housing during the pandemic, due to low borrowing costs combined with people's desire for more space as they worked from home, Canada brought in several measures to make housing more affordable. The 2022 budget proposed to provide CAD 4 billion over five years, starting in 2022-23, to the Canada Mortgage and Housing Corporation to launch a new *Housing Accelerator Fund* and to provide CAD 475 million in 2022-23 to fund one-time CAD 500 payments to those facing housing affordability challenges. The 2022 budget also reallocated CAD 500 million from the *National Housing Co-Investment Fund* to launch a new *Co-operative Housing Development Programme*, aimed at building 6000 new co-op housing units. Furthermore, the 2022 budget brought in several tax reforms related to housing, including: (1) *Tax-Free First Home Savings Account* to give prospective first-time home buyers the ability to save up to CAD 40,000; (2) doubling the *First-Time Home Buyers' Tax Credit* amount to CAD 10,000; (3) an extension of the *First-Time Home Buyer Incentive* to March 31, 2025; (4) and provision of CAD 200 million in dedicated support under the existing *Affordable Housing Innovation Fund* to help

develop and scale up rent-to-own projects across Canada. Additional measures adopted by the Canadian Government to protect homebuyers and sellers include the development and implementation of a *Home Buyers' Bill of Rights* that ensures a legal right to a home inspection and transparency on the history of sales prices on title searches. Canada's 2022 budget also signalled the government's intention to propose restrictions that would prohibit foreign commercial enterprises from acquiring non-recreational, residential property in Canada (Government of Canada, 2022c).

Theme 4: Family support specific policies: Australia, Switzerland, and the Netherlands invested in policies related to families. In its 2021 – 22 and 2022 - 23 budgets, the Australian Government announced an investment of AUD 2 billion in ECEC policy to deliver a comprehensive four-year *Strategic Reform Agreement* from 2022 to 2025, which will provide high-quality access to early childhood education and paid parental leave, aimed at increasing the participation of women in the workforce (Commonwealth of Australia, 2021). Similarly, the Swiss federal government made crèches temporarily cheaper and promoted innovative care solutions. The Swiss Parliament decided to expand the programme to further increase the number of childcare places (budget 2020-2021) and planned to approve 80 million francs in 2022 to give more support to the cantons and communes, extending their subsidization of extra-family childcare in order to reduce parents' share of the costs (The Federal Council [Switzerland], 2022). The Dutch government has taken a different approach, providing more than EUR 47 million to support individuals and their current partners with outstanding childcare debts (Government of the Netherlands, 2022). There is considerable overlap in this theme with the childcare policies examined under the "Wellbeing of children and young people" topic (see section 3.3.3.2 below).

Theme 5: Policies for people with disabilities: The budgets of three countries made special provisions for people living with disabilities. Australia pledged a record funding of AUD 33.9 billion to over 500,000 Australians who have permanent and significant disability in 2022-23, projected to increase to AUD 44.6 billion in four years. This policy aims to address labour market shortages and increase the participation of people with disabilities, through making workplaces more inclusive and accessible (Commonwealth of Australia, 2021). The Canadian Budget 2022 proposes to provide CAD 272.6 million over five years to Employment and Social Development Canada to support the implementation of an employment strategy for people with disabilities, through the *Opportunities Fund* (Government of Canada, 2022c). Luxembourg provided additional funding to support job seeking, retention and return to work, including a 2.8 % increase in severe disability income. Finally, additional monetary support has been budgeted for home support services and improved staffing for disabled people living in rural areas (Commission des Finances et du Budget, 2022).

Theme 6: Policies for vulnerable populations: Canada and Australia introduced policies for vulnerable, low-income populations. Canada acknowledged that COVID-19 exacerbated inequities linked to anti-Black racism, and that many Black Canadian communities were increasingly vulnerable to economic hardship. In the 2021 budget, they proposed to provide CAD 200 million in 2021-22 to Employment and Social Development Canada to establish a new *Black-led Philanthropic Endowment Fund* (Government of Canada, 2022c). Additionally, in a second policy, the Canadian government acknowledges that thousands of Canadians did not have a warm place to sleep during the pandemic. Therefore, as part of Canada's *Homelessness Strategy*, the federal government has committed more than CAD 3 billion to address homelessness, including doubling the annual funding for four years in response to the pandemic (Government of Canada, 2022c).

In recognition of the current inequities faced by indigenous communities, the Australian government proposed a budgetary allocation for addressing economic inequalities and opportunities. For example, the budget contains funding for improved outcomes for Indigenous Australians in aged care, health, infrastructure, education and women's safety. They propose AUD 243.6 million over five years from 2020-21 to improve economic, social and education outcomes for Indigenous Australians. This includes AUD 4 million for a new *Indigenous Skilled Employment Programme*, which will better prepare

people for the workforce. It also includes AUD 36.7 million for native title Prescribed Bodies Corporate[2] to boost their capacity to take up economic development opportunities (Commonwealth of Australia, 2021).

Theme 7: Social welfare and benefits: The Netherlands and Switzerland each have policy pertaining to social welfare, focused specifically on compensation in the event of unemployment. Switzerland proposed that their ordinary contribution to unemployment insurance should grow at an average of 2 % annually, although this special additional contribution of around CHF 70 million in the 2020 - 2022 stimulus programme did not continue in 2023. However, in a second policy they propose to increase benefits and social insurance to provide security for households by 2025. Government expenditure on social welfare is projected to increase by an average of 3.3 percent per year, largely because of the expected enactment of reforms in 2023 (The Federal Council [Switzerland], 2022). The Netherlands government states that most of their COVID-related expenses concerned social welfare, including the cost of financial support measures such as the *Emergency Bridging Measure Employment* (no EUR value assigned in English version of document) (Government of the Netherlands, 2022).

Theme 8: Cost of living interventions for low-income families: Australia is the sole comparator country to include policy measures pertaining to the current cost of living crisis in the most recent budgetary documents (Commonwealth of Australia, 2021). The first of the two policies aimed at increasing financial security for low-income families proposes a one-off cost of living tax offset, in the form of an income tax-exempt payment of AUD 250. They assert that this payment will help 6 million people, at a cost of AUD 1.5 billion. Importantly, more than half of those who will benefit are pensioners. It was paid automatically to all eligible pensioners, welfare recipients, veterans and eligible concession cardholders in April 2022. The second policy measure aimed at low-income households in the cost-of-living crisis is a temporary fuel excise relief. The Australian government state the Russian invasion of Ukraine has seen fuel prices increase, adding to cost of living pressures faced by families. Therefore, the Government proposed taking temporary action to cut fuel excise and reduce the pressure of high fuel prices on household budgets. They will reduce fuel excise by 50 per cent for 6 months. This will see excise on petrol and diesel cut from 44.2 cents per litre to 22.1 cents per litre. The Budget estimates that this measure will reduce the Government's tax receipts by AUD 5.6 billion. Due to the reduction in fuel excise, the Government will also temporarily cut AUD 2.7 billion in fuel tax credit payments (colloquially known as "diesel rebates") to the mining and agricultural sectors, bringing the total cost of this measure down to AUD 2.9 billion. This assistance builds on the "hip pocket" relief that the Government provides through halving the excise rate, tax cuts, childcare assistance, and reduced electricity prices. Further information on these two policies is provided in Box 1.

3.3.2 Results: Good, green jobs and fair work

Based on the methods and criteria described in 3.2.1, we selected the following comparator jurisdictions: Ireland, Norway, Germany, Canada and selected states in the United States of America. All the selected comparators are jurisdictions with a level of socioeconomic reliance on fossil fuels comparable to Scotland's, and all are making efforts to decarbonise. We chose one country (Ireland)

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[2] Native title is governed by the Australian Native Title Act (NTA), 1993. It is the recognition that Aboriginal and Torres Strait Islander people have rights and interests to land and waters according to their traditional law and customs. Under the NTA, native title holders must have a corporation to manage and protect their native title rights and interests. This is called a Prescribed Body Corporate.

https://www.klc.org.au/what-is-native-title#:~:text=Native%20title%20is%20the%20recognition,Title%20Act%201993%20(Cth).

http://www.nntt.gov.au/Information%20Publications/What%20is%20a%20PBC%20and%20what%20does%20it%20do%20Fact%20Sheet.pdf

and three US states (California, Washington and Oregon) because they are implementing interventions similar to ones that Scotland is considering. Ireland is implementing a transition programme specifically for the Midlands region of the country. The population in the Midlands has long depended on peat as an economic activity and a high-carbon raw material for electricity generation. Ireland's green recovery, which involves abandoning peat, will disproportionately disadvantage the Midlands population. This policy bears some relevance for Scotland which is also aiming to assist the North East and Moray regions to transition from their dependence on oil and gas (Department of the Environment, 2021) The rationale for choosing California, Washington and Oregon is because these states lead the USA in their numbers of EVs per capita (US Department of Energy, n.d.-a). EVs and related infrastructure is an emerging area of strategic focus for Scotland. Ireland, Norway, Germany and Canada have similar climates to Scotland. In addition, we included the US climatically similar eastern seaboard states of Maine, New York, Maryland and Massachusetts. Finally, we chose jurisdictions which have both federal and devolved political systems (i.e., Germany, Canada and selected US states).

As with the first topic, the documents we analysed on good green jobs and fair work provide information on the problems that policies were designed to address, on the policy interventions themselves, on their intended outcomes and on targeted beneficiaries. However, details are lacking on policy development processes and policy effectiveness.

3.3.2.1 Distribution of policy themes

A review of government-issued documents from the selected countries revealed diverse policies and interventions that were being proposed and implemented. We have categorised these into six broad themes: (1) Decarbonising and investing in cleaner energy sources. This entails reducing greenhouse gas emissions and creating jobs in the cleaner energy sector. (2) Green knowledge, innovation, research and development to teach and invent ways to create and sustain climate-resilient societies. (3) Development of a digital economy to create new job opportunities, capacitate job seekers to take up those opportunities and support remote workers. (4) Energy efficient retrofits, renovations and constructions to make buildings more energy efficient, while creating jobs, with a focus on low-income homes, homes at risk of fuel poverty and public sector buildings. (5) Supporting a just energy sector transition by helping workers to transition to low carbon economic activities and jobs. (6) Nature-based solutions and agricultural sector investments, ranging from tree planting and forest management to responsible evidence-based agricultural and food production practices.

Each country is implementing different specific activities under each theme. These six broad themes can be further broken down into 19 more specific sub-themes (outlined in Appendix 4: Supplementary Table 4.2).

The emphasis that each of the selected countries places on each policy theme differs. Figure 1 summarises how the six policy themes are ranked by priority, based on the amount of funding committed towards particular interventions or policies or (where it was unclear how much money has been committed) on the emphasis placed on each theme in each country's publicly available climate action blueprint. Differences in the ranking of green recovery priorities across countries are linked to countries' focus prior to COVID-19. For instance, Germany is keen to retain its high-ranking position in the global automotive industry by focusing on low emission vehicles; Norway is interested in continuing the extraction of oil and gas, using cleaner technology to do so, while retaining the global competitiveness of its maritime industry (Norwegian Ministry of Climate and Environment, 2022). Two things are worth noting regarding Figure 1. Firstly, the USA has not been included in this figure because only a handful of states were selected for analysis, some of which were selected based solely on their focus on a policy/strategy that was considered relevant to Scotland (e.g., EV policy in the West Coast states of California, Washington, and Oregon). A ranking of policy priorities for the USA would

therefore have been inaccurate. Secondly, we have not included digital transformation in this figure because this is a cross-cutting policy/strategy, which is often embedded in other policies/strategies. For example, Germany reports that it has allocated over 50% of its Resilience Recovery Plan resources towards data-driven innovation and the digitisation of the economy, education, health, and public administration (Federal Ministry of Finance [Germany], 2021b). It was therefore difficult to accurately position "Developing a digital economy" on the ranking scale in Figure 1 alongside other policy themes.

3.3.2.2 Analysis of policy themes

Theme 1: Decarbonising: What is immediately apparent from Figure 1 is the almost universal focus on decarbonising and reducing GHG emissions as a top priority in selected countries. However, different countries are taking different approaches towards achieving this. Norway for instance is looking into cleaner ways of continuing the extraction of oil and gas (rather than cessation of extraction) which would result in lower GHG emissions. Norway is also exploring ways of providing renewable/cleaner energy for its maritime industry (Norwegian Ministry of Climate and Environment, 2022), an industry for which it is renowned globally. Ireland is moving away from using peat and coal as means to generate electricity, while increasing reliance on renewable electricity generation resources such as solar and wind (Department of the Environment, 2021). Germany aims to invest more in climate-friendly mobility (through the promotion of electric and hydrogen-powered road and rail vehicles and infrastructure), the decarbonisation of its steel and chemical industries and investing significantly in a 'well-functioning green hydrogen economy', as outlined in its *National Hydrogen Strategy* (Federal Ministry of Finance [Germany], 2021b; The Federal Government [Germany], 2021). In the USA, the states of California, Washington and Oregon combine monetary incentives, loans, grants, and legislation to lower GHG emissions from the transport sector, having identified transportation as the major source of GHG emissions. Legislation stipulates vehicle emission standards, which aim, among other objectives, to ensure that all new vehicles meet the Zero Emission Vehicle standard by mid-century. Through its *Clean Vehicle Rebate Project* and the *Charge Ahead Rebate Program* for low- and middle-income households, Oregon is seeking to promote clean vehicle adoption by offering rebates for the purchase or lease of new, eligible zero-emission vehicles or charging stations (California Air Resources Board, n.d.; California Energy Commission, 2022; State of Washington Department of Ecology, n.d.; US Department of Energy, n.d.-b).

Theme 2: Green Knowledge, Innovation, Research and Development: Countries recognise the need to generate new climate-friendly technologies, and this is reflected in their policy priorities. Plans to decarbonise are often intertwined with plans and investment in research and development. For example, as part of their decarbonising and cleaner energy drive, Germany and Canada are operationalising their respective *National Hydrogen Strategies* (The Federal Government [Germany], 2021; Zen, 2020) which aim to increase the capacity for green hydrogen production, transportation, value addition and utilisation. In Europe, countries' *Green Knowledge, Innovation, Research and Development* policies are considerably influenced by broader European and/or EU initiatives. For example, aspects of Germany's hydrogen strategy are being pursued collaboratively together with France under the auspices of the *Important Projects of Common European Interest* (IPCEI) and financed through EU loans accessed as part of the EU RRF (Federal Ministry of Finance [Germany], 2021b). Likewise, Norwegian research and innovation groups working in climate, the environment and energy have been awarded approximately NOK 2.6 billion from the EU's *Horizon 2020*, since 2014. Furthermore, grant amounts by the Research Council of Norway for projects dealing with climate, the environment and clean energy have been increasing annually from the year 2014. Norway has a dedicated state enterprise (Enova) mandated with the promotion of climate-friendly energy production and consumption, and the development and market introduction of energy and climate technology (Norwegian Ministry of Climate and Environment, 2022). Similarly, Ireland has dedicated

state enterprises focused on the environment and sustainable energy; the Environmental Protection Agency (EPA) and the Sustainable Energy Authority of Ireland (SEAI). Public funding available through the SEAI's *National Energy Research Development and Demonstration Funding Programme*, is invested in innovative energy research projects (Department of the Environment, 2021).

Theme 3: Development of a Digital Economy: The digital transformation of societies was generally accelerated by the COVID-19 pandemic and countries are committing to sustain the momentum. Moreover, there is acknowledgement that data, data skills and high-performance computing are critical in conferring competitive advantages to countries in the future. Countries have therefore laid out digital strategies in the context of post-pandemic recovery, which articulate their aim to position themselves as leaders in the global digital space (Department of the Environment, 2021; Federal Ministry of Finance [Germany], 2021a), and providing remote workers, households, and small businesses the opportunity to better participate in a digital society, through increased access to broadband services (Department of the Environment, 2021; Government of Canada, 2022c) .

Theme 4: Energy Efficient Retrofits, renovations, and constructions: Home-energy upgrades (referred to as retrofits or weatherization) present several climate-related and economic advantages. These include alleviating energy poverty by making homes warmer at lower costs, lessening GHG emissions and creating work opportunities. Therefore, many countries identified building retrofits and other energy-efficient construction methods as means to achieve their energy, climate and just transition goals, even prior to the COVID-19 pandemic. Among the countries whose post-pandemic green recovery policies were reviewed, Canada and Ireland stand out in this regard. Ireland is implementing an extensive national retrofit plan that has reportedly delivered upgrades to over 450,000 homes since the year 2000 including 143,000 low-income households that have benefitted from free upgrades. The Government of Ireland went further and committed to providing approximately EUR 8 billion for retrofit work up to 2030, to boost this sector of the economy and equip it to take advantage of future opportunities (Department of the Environment, 2021). Canada's 2022 budget proposed to allocate over CAD 1 billion Canadian towards retrofitting existing homes and buildings, fund research into innovative construction materials and make available low interest loans to enable homeowners to fund their home upgrades. This is in addition to the CAD 10 billion that has been invested in decarbonising and retrofitting homes and buildings since 2016 (Government of Canada, 2022c).

Theme 5: Energy sector transition - helping workers to transition: As countries reduce their dependence on high-carbon fuels, some workers in affected sectors are vulnerable to job losses and some regions' socioeconomic and cultural vibrancy may be undermined. In response, countries are supporting such vulnerable workers as they migrate to new jobs and sectors. Various approaches are being mooted which aim at future-proofing people against sector shrinkage and skills obsolescence. The Norwegian government reports taking steps towards ensuring cooperation between higher education and industry so that higher education offerings align with industry's evolving labour requirements (Norwegian Ministry of Climate and Environment, 2022). Ireland reports to have anchored its *Just Transition* programme in adopting an integrated, structured, responsive and evidence-based approach to transition; forecasting and imparting people with the right skills needed for a green economy; and the equitable sharing of benefits and costs of the transition and social dialogue (Department of the Environment, 2021). In the Midlands region, which faces a critical threat due to the cessation of peat-based electricity generation, a Just Transition Commissioner was appointed to mediate the necessary consultations and dialogue between government and the affected region. More details of this policy proposal are presented in Box 2. Other intervention proposals involve the creation of new jobs through the rehabilitation of former sites of high-carbon

resource extraction e.g., clean-up of abandoned Canadian oil and gas wells (CAD 1.7 billion) and rehabilitation of Irish peat bogs (EUR 126 million) (Department of the Environment, 2021; Office of the Prime Minister, 2020).

Theme 6: Nature-based solutions: The role of trees and forests in capturing carbon and protecting against biodiversity loss is well-accepted. Countries have laid out plans to invest in nature while protecting the incomes of those that rely on nature-based economic activities. Canada's > CAD 4 billion *Natural Climate Solutions Fund* supports three nature-based interventions towards green recovery: 1) The *2 Billion Trees Program*, which aims to grow two billion trees across 10 years, spent over CAD 59 million and saw over 29 million trees planted across 500 sites in 2021 (Government of Canada, 2022a); 2) the *Nature Smart Climate Solutions Fund*, which awards grants to projects that are protecting at-risk species, wetlands, peatlands, and grasslands (Government of Canada, 2022d); and 3) the *Agricultural Climate Solutions Program*, which promotes climate-friendly agricultural practices (Government of Canada, 2022b). Agricultural-based reforms are likewise on the recovery agenda of Ireland, whose agricultural sector is the single largest contributor to GHG emissions. Ireland has targeted to reduce its agricultural emissions by 22 – 30 %, from 23 million tonnes of CO_2 equivalent (MtCO$_2$eq), down to 18 MtCO$_2$eq by 2030 (Department of the Environment, 2021). Out of the USD 1.13 billion earmarked for post-pandemic economic recovery in the US state of Maine (disbursed by the federal government), USD 50 million was committed to its "heritage industries" i.e., fishing, farming, and forestry, to enable post-pandemic job protection, while ensuring that natural resources are used in a sustainable manner through research and development plus upgrades in production and supply chain infrastructure (Office of the Governor of Maine, 2021). Norway is exploring the use of biological and technological innovations to cut greenhouse gas emissions from agriculture. It is anticipated that robots will eventually replace fossil-fuel powered farm equipment, cattle breeding enterprises will leverage techniques that lower emissions by > 1 MtCO2eq, fertilizer manufacturers will reduce nitrous oxide emissions from mineral fertiliser and high-quality fertilizer will be developed from manure (Norwegian Ministry of Climate and Environment, 2022).

3.3.2.3 Regional governments and the post-pandemic green recovery

Canada, the USA and Germany all have some green recovery strategies that are being driven by regional governments. Generally, examples involve regional governments receiving recovery funding from federal government but having some discretion on how that funding is used, based on local priorities. For instance, the US state of Maine received USD 4.5 billion from the federal government's *America Rescue Plan*, of which USD 1.13 billion could be used at the state's discretion in response to the pandemic and post-pandemic economic recovery (Office of the Governor of Maine, 2021). Likewise, Canada's CAD 700 million *Jobs and Growth Fund*, and at least three other post-pandemic support and relief funds, are federally financed but disbursed via Regional Development Agencies to eligible applicants (Government of Canada, 2021). Similarly, in the USA, federal grants and technical support are availed to States to support their energy priorities (Department of Health and Human Services, n.d.). In Europe, the EU's influence on countries' green recovery policies is significant, both as an agenda setter and a source of grants and loans, through the EUR 672.5 billion RRF (Federal Ministry of Finance [Germany], 2021a, 2021b).

3.3.3 Results: Wellbeing of children and young people

Australia, Belgium, Finland, France, and Germany met our criteria for policies focusing on the wellbeing of children and young people and were included in this review. Overall, we identified limited policies focusing on the wellbeing of children and young people. As with the previous two topics, we

found descriptive details of the policies themselves and their intended effects but very little analytical or empirical data on policy processes or effectiveness.

3.3.3.1 Distribution of policy themes

We categorised relevant policies according to three main policy themes: (1) childcare (Australia and Germany had policies on this theme); (2) the education of children and young people (all five comparator countries had policies on this theme); and (3) employment and upskilling (we found policies on this theme for all countries except Australia) (table 7). Notably, we found only two policies related to children and young people's mental health and wellbeing, with limited detail provided on either. Australia identified a budgetary allocation of AUD 203.7 million for its *Student Well-being Boost*, with the average school receiving AUD 20,000 towards improving student mental health and well-being. The policy also introduced a new voluntary mental health check tool to assist schools in the early identification of students who are struggling (Commonwealth of Australia, 2022c). Finland also introduced a policy focusing on early intervention to identify and alleviate pandemic-associated harms and identifying children and adolescents as a key target group. However, specific information about serving this population was not clearly described in the document (Finnish Government, 2021).

3.3.3.2 Analysis of Policy Themes

Theme 1: Childcare Policies: The Australian Government has introduced a raft of childcare policies, originating before the pandemic, with an initial investment of AUD 62 billion dating back to 2013 (Commonwealth of Australia, 2022a). The 2020-21 budget provided AUD 1.7 billion to make childcare more affordable for families through the removal of the annual cap on the *Child Care Subsidy* and increased subsidies for second and subsequent children (Commonwealth of Australia, 2022a). Further investment was announced in the 2021-22 budget (AUD 10.3 billion) (Commonwealth of Australia, 2022a) and in both 2022 – 23 budgets (Commonwealth of Australia, 2022a; (Commonwealth of Australia, 2022c). According to the government's own estimates, as highlighted in the October 2022-23 budget, it is expected that from July 2023 childcare subsidy rates will increase further: the Australian Government announced an investment of AUD 531.6 million over 4 years from 2022–23 to expand the *Paid Parental Leave Scheme* based on their assessment of COVID's impact on working parents, particularly women (Commonwealth of Australia, 2022c). It is expected that through this reform, by 2026, families will be able to access up to 26 weeks of paid parental leave, thereby supporting parents to spend more time with their children and share caring responsibilities more equally (Commonwealth of Australia, 2022c). Notably, the Australian government's framing of its childcare policies emphasises economic growth, rather than wellbeing. Making childcare more affordable and expanding paid parental leave for working families is intended to increase economic opportunities for women and to support families' flexibility for managing work and childcare (Commonwealth of Australia, 2022a).

The German government took a different approach to supporting childcare, focusing investment on childcare facilities and day care for pre-school children and babies. The federal government provides Länder (German states) and local authorities with grants worth EUR 500 million to be used for construction of new buildings, extensions, conversions, refurbishments, renovations and equipment. The aim is to increase the availability of childcare facilities in order to create the conditions to enable parents, especially single mothers, to participate in the labour market and/or increase their working hours, along with benefiting socially disadvantaged children and strengthening their skills levels (Federal Ministry of Finance [Germany], 2021b) . Germany's investment in childcare facilities has parallels with Scotland's expanded funding of early learning and childcare for children aged under 3 (Scottish Government, 2016) and wraparound childcare initiatives (Scottish Government, 2021) .

Theme 2: Education: We identified three policies which addressed the theme of education of children and young people. Most of the policies focus on digitisation of education (Belgium, Finland, Germany, and France). The Australian government increased its recurrent annual funding for schools to AUD 25.3 billion in 2022, with an additional AUD 225.8 million to improve educational outcomes of school students who are particularly disadvantaged. Australia also made provisions for supporting pre-school age children to access at least 15 hours a week of quality education as part of the Government's AUD 2 billion *Preschool Reform Agreement*, which seeks to improve preschool participation and outcomes including for Aboriginal and Torres Strait Islander children and disadvantaged children (Commonwealth of Australia, 2022a). Furthermore, the Australian Government invested AUD 19.7 billion in the university sector in 2022 and delivered 30,000 new university places in 2021; 55,000 new short course places in 2021 and 2022; and provided additional support for students in regional and remote Australia through their *Job-ready Graduates* package (Commonwealth of Australia, 2022c) .

The German government has invested EUR 1.4 billion in their 'Digital Education Initiative' which aims to exploit the opportunities and potential that digitisation offers individuals and society. This initiative aims to strengthen teachers' and pupils' digital skills and create equal educational opportunities amongst all teachers and pupils by creating digital infrastructure; expanding digital teaching, learning and communication facilities; and establishing digital innovations in the education system. The digital education initiative has four components: provision of teacher devices; development of a national education platform; creation of centres of excellence for digital and digitally supported teaching; and modernisation of the Bundeswehr's (armed forces of Germany) educational and training facilities.

The French government, with EU RRF investment, has allocated EUR 131 million to implement a plan to improve the use of digital technologies in education. This aims to equip 45,000 classrooms with new digital technologies and to give 1.4 million higher education students access to hybrid learning by the end of 2022 (European Commission, 2021c).

The Belgian government's Recovery Plan will invest EUR 480 million in education, in order to create a more inclusive and future-proof education system by broadening access to digital tools, technologies and training (European Commission, 2021b). The focus is on enhancing the digital and STEM (Science, Technology, Engineering and Math) skills of pupils and students. A further EUR 400 million was invested by the government to boost Belgium's innovation capacity by financing research and innovation infrastructure and programmes (European Commission, 2021b).

Finland's education recovery policy focuses on upskilling and continuous learning reform. It is estimated that this will cost EUR 84 million overall, of which EUR 35 million has been allocated for the *Starts at Universities* programme for young people, the purpose of which is to mitigate the negative impacts of the COVID crisis by improving young people's access to university (Finnish Government, 2021, p. 204)). Education policy also includes the *Continuous Learning Digitalisation Programme* (EUR 46 million), which consists of a digital service package for continuous learning, spanning the entire education system, and a digitisation and flexible learning package aimed at the university level. The nationwide digital service package consists of interconnected intelligent online services, such as services for assessing competence and identifying prior learning, guidance services, search services for education, services for the provision of education, and related data resources (Finnish Government, 2021). The third element of Finland's education recovery policy focuses on investment in the digitalisation and modernisation of education in Åland, an autonomous region within Finland (Finnish Government, 2021, p. 204)

Theme 3: Employment and Upskilling: We identified 16 policies across four comparator countries addressing this theme. France had the maximum number of policies (14) incorporated into their youth

employment plan, *1 young person, 1 solution* (Gouverment [French Government], 2020) jointly funded by the French government and the EU RRF (EUR 4.6 billion of EUR 5.1 billion) (European Commission, 2021c; Gouverment [French Government], 2020). This raft of policies prioritises disadvantaged youth, those who are most isolated from the labour market and young people recognised as disabled workers. It also prioritises students who do not benefit from cultural and social networks likely to support their academic and professional ambitions, primarily those enrolled in priority education or residing in a "*Quartier Prioritaire de la Politique de la Ville*" (QPPV) (i.e., a designated area of disadvantage) and middle and high school students residing in rural and/or isolated areas   This raft of policies aims to develop young people's transferable employment skills by providing grants to young people and to employing organizations to create jobs and paid apprenticeship opportunities (Republique Francaise, undated). This is the only policy we found that has been formally evaluated.   Since its introduction in August 2020, more than two million young people have benefited (European Commission, 2021f). 1.8 million young people under the age of 26 have been hired on permanent or fixed-term contracts of more than three months. The success of this approach has been attributed to the exceptional mobilisation of both public and private sector employees (European Commission, 2021a). *1 young person, 1 solution* has also been evaluated by the French Parliament's Recovery Plan Evaluation Committee, which found that employment in France is returning to pre-pandemic levels faster than other European countries, including Spain, UK and Italy. Young people's employment levels in France had returned to pre-COVID levels by the end of August 2021 (Republique Francaise, undated). EUR 3.6 billion had been disbursed by the end of September 2021, enabling the allocation of just over 2.1 million subsidies, funding 450,000 new hires and 850,000 entries into work-study training contracts (Republique Francaise, undated). France's *1 young person, 1 solution* policies have similarities with Scotland's *Young Person's Guarantee Programme* (Scottish Government, 2021): both focus on providing jobs, apprenticeships, further or higher education, training programmes, formal volunteering or enterprise opportunities.

Belgium's policies promote youth training and skills development by allocating EUR 450 million for reskilling and upskilling initiatives (Belgian Government, 2021; European Commission, 2021b). Consistent with the French plan, Belgium's policies focus on skills acquisition in line with current and future labour market needs, and the participation of vulnerable groups, including the low-skilled, women, people with migrant backgrounds and people with disabilities (European Commission, 2021d, 2021e). Belgium's Digital policy mirrors the Scottish *Attainment Challenge Programme,* under which every school-aged child will have access to an appropriate digital device and connectivity per both their programs (Scottish Government, 2021).

In contrast, the German government has focused on boosting on-the-job training. EUR 850 million has been disbursed to small and medium-sized enterprises (SMEs) to support them in taking on new trainees, maintaining current levels of training, creating additional training places, avoiding short-time working for trainees, or taking on trainees from companies that have become insolvent. The aim of this policy is to cushion the social and economic effects of the pandemic, promote the right conditions for high wage growth and secure a supply of skilled workers for the country (Federal Ministry of Finance [Germany], 2021b).

Finland's approach to employment and upskilling focuses on upskilling and raising the employment rate to accelerate sustainable growth (Finnish Government, 2021). Although this policy is not solely focused on young people, the government has prioritised the provision of opportunities for location-independent continuous learning for young people, recognising that raising average skills levels is essential for long-term growth strategies (Finnish Government, 2021). Finland also has a labour market policy focusing on young people (*Youth Guarantee*), which has allocated EUR 13 million aimed

at preventing young people' exclusion from the labour market and their wider social exclusion. This builds on an existing initiative, the *Ohjaamo* guidance points, which has been operating since 2015 and has received an estimated EUR 53 million in public funding (Finnish Government, 2021). This consists of a low threshold set of services responsive to the diverse needs of young people, which aims to revitalise workplace culture and operating practices (Finnish Government, 2021). Of the young people accessing *Ohjaamo* services, about 30% need information on employment, 22% need upskilling, and 26% have wellbeing or income issues, with some needing support for coping with everyday life, or advice on health, or on hobbies (Finnish Government, 2021). This policy has parallels with Scotland's *Young Person's Guarantee Programme* (YoungScot, undated).

4. Discussion

We analysed policies on Scottish government's three priority topics (financial security for low-income households; good, green jobs and fair growth; and the wellbeing of children and young people) from 11 comparator jurisdictions (Australia, Canada, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, Norway, Switzerland and selected states in USA). We found considerable overlap and synergies between the three topics. Strong cross-cutting themes present across all three topic areas include policies which aim to: support incomes and address poverty; create fair employment opportunities; reduce inequalities; and enhance education and training (Table 8).

Our analysis of policies bolstering **financial security for low-income households** is based on policies from Australia, Canada, Switzerland, the Netherlands and Luxembourg, categorised into eight themes. Australia and Canada offer some of the most comparable examples of policy for Scottish Government to consider in support of low-income households. Many recovery policies specifically target inequalities and vulnerable populations, within the overall category of low-income households. Similar to the Scottish Government's approach, most of the comparator jurisdictions focus on using family-oriented policies to address child poverty.

Our analysis of post-COVID **green recovery strategies** is based on policies from Ireland, Norway, Germany, Canada and selected US states, categorised into six broad themes, which can be broken down into 19 more specific sub-themes. All the selected comparators are jurisdictions with a level of socioeconomic reliance on fossil fuels, so it is unsurprising that decarbonisation and reducing GHG emissions are top priorities. However, how each country is proposing to lower emissions depends on their unique pre-COVID economic strategic focus. Many well-developed 'green transition' (now green recovery) policies pre-date COVID. The pandemic presented an opportunity to rebuild, and countries have taken the opportunity to place greater focus on resilience, including climate resilience.

Our analysis of policies focusing on the **wellbeing of children and young people** is based on policies from Australia, Belgium, Finland, France, and Germany, categorised into three themes: childcare, education and upskilling. Strikingly, the dominant focus of policies on this topic is on enhancing childcare provision and investing in young people's education and skills as a means of boosting economic growth, rather than responding to wellbeing deficits. We found very few policies explicitly addressing children's and young people's wellbeing and mental health. This is perhaps surprising, in view of the impact of school closures and lockdown policies on the wellbeing of children and young people. A possible explanation for this is that it is consistent with a public health approach that prioritises upstream interventions to address the root causes of health problems, rather than downstream, health system approaches.

This review has several strengths. By integrating findings from the published academic literature with an analysis of government policy documents, we offer insights into how different countries have allocated funds and developed or refined existing social and economic policies in response to the

challenges wrought by the COVID pandemic. There are clear parallels between themes emerging from the academic literature and Scotland's COVID recovery priorities. Green recovery is a ubiquitous theme, although the emphasis differs from country to country. We also found parallels with Scotland's social and economic priorities, particularly in relation to investment in education, training, employment and support to families.

A key conclusion from the literature review is that policy choices are path-dependent, with countries building on existing strengths or leveraging pre-existing policies (Geels, 2022). Our analysis of government policies reinforces this finding: many of the COVID recovery policies we identified pre-date the pandemic and have been repurposed or enhanced and incorporated into countries' COVID recovery plans. A second key finding from the literature review is that policy choices are also influenced by political and economic concerns and considerations (Geels, 2022). Again, our policy analysis reinforces this finding, particularly in relation to the role of the EU. Six of our exemplar jurisdictions (Finland, France, Germany, Ireland, Luxembourg and the Netherlands) are EU member states and can access EU RRF funding if their recovery plans align with EU priorities. We found that policy choices in these countries reflected EU priorities and framings, particularly in relation to green growth, social investment policies and policies aimed at reducing inequalities. The impact of EU policy is even discernible in the plans of Norway, which is not a member state, but which receives EU research and development funding (Norwegian Ministry of Climate and Environment, 2022).

The COVID-19 pandemic has exacerbated pre-existing inequalities in employment, education, health, healthcare, and housing. Both in our academic literature review and our policy analysis, we found a variety of policies which aim to address these inequalities. This is a key recurring theme in our report. Online teaching became normal practice during the pandemic for primary and secondary school-aged children. Although this new mode of working allowed students to continue their studies during the lockdown it also highlighted the pre-existing digital divide. The German, French, and Belgian governments' policies aimed to strengthen the skills of pupils and teachers by establishing a digital innovation system and increasing access to hybrid learning (European Commission, 2021c). The pandemic has had a profound effect on the opportunities afforded to women during the pandemic as they were disproportionately responsible for child caring duties. As a result, Australia and Germany implemented policies to make childcare more affordable and accessible for working families (Commonwealth of Australia, 2022c; Federal Ministry of Finance [Germany], 2021b). Providing quality childcare and education opportunities is important to address the detrimental impact that the COVID-19 pandemic had on low-income families.

Policies introduced in Italy, Spain, and Belgium all targeted vulnerable populations for training and skills development programmes (Belgian Government, 2021; Guillen, 2022). Increasing the skills of the workforce is important to prepare for the increase in Green jobs. Addressing housing inequality has been the aim of policies created in several countries. Providing affordable quality housing for low-income populations was the major aim of policies found in both reviews. Countries like Canada and Australia created policies to provide mortgage support and build new houses. In contrast, the Portuguese approach prioritises the provision of social housing to the most vulnerable and disadvantaged, specifically people experiencing homelessness, refugees, victims of domestic violence and members of the Roma community. Quality housing access and quality healthcare services are connected, and Italy's reform policies target urban/rural health inequalities (Filippini, 2021). Healthcare equity aims to improve the health of all groups by improving living and working conditions.

Canadian and Australian policymakers have acknowledged the links between anti-Black racism and health inequalities. Both countries have created targeted efforts to connect to Black and indigenous

communities to improve economic, social, and education outcomes (Commonwealth of Australia, 2021; Government of Canada, 2022a).

Fair work is a theme that recurs in all three priority areas. We found multiple examples. Increases in the minimum wage and tax cuts for low and middle-income earners aim to boost employment income. Incentivising employers to take on apprenticeships aims to upskill the workforce, particularly in relation to digital skills. Family support policies, such as improvements in the quality, availability and cost of childcare support parents, particularly single mothers, to return to work. We found multiple measures to incentivise employers to increase the workforce participation of vulnerable groups, including young people, people from disadvantaged backgrounds and people with disabilities. We also found evidence of investment in addressing race/ethnic inequalities in employment. We found evidence of participatory and consultative approaches to workforce transition aimed at ensuring that the costs and benefits of new green jobs are shared equitably. Finally, energy efficiency retrofit policies aim to create new jobs, particularly in geographically deprived areas. A key point to note, however, is that the state is not the key actor in this arena: the success of fair work policies is dependent on effective collaboration with employers.

In undertaking this review, we faced several challenges and as a result, our review has some limitations. COVID recovery strategies have been developed, described and categorised in different ways by different governments, making it difficult not only to analyse the policies but also even to identify them in the first place. The scope of this work was very broad, ranging across multiple jurisdictions and topic areas so in-depth analysis of specific policies was not possible in the time available and we had to prioritise where to focus our attention. Our analysis of green recovery strategies placed more emphasis on green jobs than on fair work and this influenced our choice of comparator jurisdictions: a focus on fair work would have resulted in a different set of comparator countries. We have sought to redress this imbalance by highlighting examples of fair work policies identified under the low-income families and children and young people themes.

This work was conducted between the spring and autumn of 2022, a time when many countries were at the early stages of developing and articulating their COVID recovery plans. As such, it is too early in the evolution of these plans for there to be empirical evidence of the effectiveness of specific policies. Most of the plans we identified are little more than funding pledges, which may not ultimately evolve into implemented policies. For example, the latest Australian budget, published in autumn 2022, reverses earlier tax-cutting pledges (Commonwealth of Australia, 2022b). Evaluating policy documents at this early stage of implementation also meant that we found very little evidence about policy processes or about the assumptions and theories of change underlying policy choices. We found very little information, either in the academic literature review, or in the policy analysis, about the assumed mechanisms and causal chains connecting policies and desired outcomes, nor about plans for future policy evaluations.

Seven of our 11 comparator countries are non-English-speaking, so we had to rely on translated versions of many documents which may have impacted the amount of relevant data extracted. A further challenge was that differences in currencies and interventions limited the extent to which comparisons across countries could be made. Due to time constraints, we limited our search and analysis to five countries per theme, so we may have missed important and relevant comparator policies from excluded countries. Finally, the intervention of the war in Ukraine, which happened during the early stages of this project, adds another layer of uncertainty: given the economic impact of the war, and its effect on the cost of living, particularly in Europe, may result in plans being revised, delayed or abandoned altogether.

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